

What is claimed is:

1. A system, comprising:  
a transmitter element creating an interrogation signal and transmitting the interrogation signal; and  
a receiver element receiving a reflection signal of the interrogation signal and combining the reflection signal and a feedback signal to cancel at least a portion of radio frequency echo signals in the reflection signal.
2. The system according to claim 1, wherein the feedback signal is derived by isolating an error component of the reflection signal.
3. The system according to claim 2, wherein the error component of the reflection signal is isolated in one of an in-phase signal and a quadrature signal.
4. The system according to claim 2, wherein the error component of the reflection signal is isolated by filtering the reflection signal.
5. The system according to claim 4, wherein the feedback signal is combined with the reflection signal within an impulse response time of a filtering element which is filtering the reflection signal.
6. The system according to claim 1, wherein the reflection signal is reflected by a radio frequency tag.
7. The system according to claim 1, wherein the feedback signal is derived through one of analog processing and digital

processing.

8. A method, comprising the steps of:
  - receiving a reflection signal;
  - deriving a feedback signal from the reflection signal by isolating an error component of the reflection signal; and
  - combining the reflection signal and the feedback signal to cancel at least a portion of radio frequency echo signals in the reflection signal.
9. The method according to claim 8, wherein the error component of the reflection signal is isolated in one of an in-phase signal and a quadrature signal.
10. A method, comprising the steps of:
  - demodulating a reflection signal into an in-phase signal and a quadrature signal;
  - filtering the in-phase signal to isolate an in-phase error signal;
  - filtering the quadrature signal to isolate a quadrature error signal;
  - modulating the in-phase error signal and the quadrature error signal to create a feedback signal; and
  - combining the reflection signal and the feedback signal to cancel at least a portion of radio frequency echo signals in the reflection signal.
11. The method according to claim 10, wherein the filtering steps include one of low pass filtering, band pass filtering and high pass filtering.

12. The method according to claim 10, further comprising the step of:  
amplifying the feedback signal prior to the combining step.
13. The method according to claim 10, further comprising the steps of:  
converting the in-phase signal and the quadrature signal from an analog signal to a digital signal; and  
converting the in-phase error signal and the quadrature error signal from a digital signal to an analog signal.
14. A system, comprising:  
a demodulator to demodulate a reflection signal into an in-phase signal and a quadrature signal;  
a first filter to isolate an in-phase error signal from the in-phase signal;  
a second filter to isolate a quadrature error signal from the quadrature signal;  
a modulator to modulate the in-phase error signal and the quadrature error signal to create a feedback signal; and  
a combiner element to combine the reflection signal and the feedback signal to cancel at least a portion of radio frequency echo signals in the reflection signal.
15. The system according to claim 14, wherein the first and second filters are one of a low pass filter, a band pass filter, a high pass filter and a base-band digital radio.
16. The system according to claim 14, wherein the combiner element is one of a radio frequency splitter and a directional coupler.

17. The system according to claim 14, further comprising:  
an amplifier to amplify the feedback signal before input into the combiner element.
18. The system according to claim 14, further comprising:  
a sample and hold element that activates a hold mode when a receiver for receiving the reflection signal is receiving a backscatter signal.
19. The system according to claim 14, further comprising:  
a third filter to filter the feedback signal before input into the combiner element.